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8 April 1966

## ANALYSIS OF CHINESE POWER THE ECONOMIC BASE AND POTENTIAL FOR MILITARY AND POLITICAL POWER

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USAWC RESEARCH ELEMENT  
(Thesis)

Analysis of Chinese Power  
The Economic Base and Potential  
for  
Military and Political Power

by

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8 April 1966

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## SUMMARY

In the next decade, Communist China cannot become a world power. Her economic base is just not adequate to take such a giant step in such a short period of time.

The basic issues are a huge and expanding population, inability to feed the population, and the absence of the means to rapidly develop Chinese industry.

This is not to say that China cannot become a world power--for she can. She has adequate natural resources; she has human resources; she has an industrial base that is expanding slowly; she has leadership dedicated to making China a world power; she has space and land even though productive land is scarce; she has an illiterate but responsive population; she has the advantage of centralized control and planning for all aspects of the economy; she has discovered the value of incentives to aid production; more importantly, she shows signs of using and expanding the incentive device; she shows signs of a willingness to take steps to control the population growth; she has a well supported "National Purpose" to make China again significant in the world and particularly in Asia; she does not have neighbors that seek her territory; she does have a world of nations that would like to tap her market of millions of people--for the first time in history; and, she has a government that is in complete control and has the will and the means to direct China's destiny.

In short, China's economic base is not adequate for world power now, but it has all the necessary attributes to become a world power over a period of 30 to 50 years. This time factor could be shortened considerably if China were to make herself respectable and trusted in the international scene. Greedy nations have poor vision when a profit is involved. Therefore, China could get needed industrial imports (assuming she can expand exports) much faster if she presented a less belligerent attitude. Even now countries like France, Canada, Australia and others are interested in expanding trade with China.

To the question "Will China become a world power?," the answer is "Yes." The real question is "when." The opposite answer could be given if one speculates on a Chinese-American war. In this case, it would easily be possible for air attacks to destroy the entire economic base of China, including her small nuclear project. It is this fact that has rendered China's "actions" much more cautious than her loud pronouncements.

It is the purpose of this thesis to measure the economic base of China and to predict her economic potential over the next ten years. While fraught with perils, what follows attempts to do this.

## CHAPTER 1

### INTRODUCTION

All people suffering from US imperialist aggression, oppression, and plunder, unite! Hold aloft the just banner of people's war and fight for the cause of world peace, national liberation, people's democracy, and socialism!

Victory will certainly go to the people of the world!

Long live the victory of people's war!<sup>1</sup>

So ends an article by Lin Piao, Vice Premier and Minister of Defense of Communist China. The article was released on the eve of the 20th anniversary of the Chinese victory in the Chinese people's war of resistance against Japan, which fell on 3 September 1965. This is not an article to be taken lightly. It is a warning to the world that the Communist Chinese seek to unite and support all aspiring peoples in wars against the United States and the free world. Furthermore, it blueprints the world strategy to be used and, thus, has been widely identified as the "Chinese Communist Manifesto."

O. Edmund Clubb stated:

A meaningful foreign policy must be related intimately to the power sources at the disposal of the concerned nation. In the absence of power, revolutionary jeremiads have no more chance of fulfillment in the arena of international affairs than do moral homilies. The power position includes the nation's armed forces, its economic strength, national morale, and the quality of the state's leadership.<sup>2</sup>

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<sup>1</sup>Lin Piao, "Long Live the Victory of the People's War," Daily Report Supplement, p. 31.

<sup>2</sup>O. Edmund Clubb, The International Position of Communist China, The Hammarskjold Forums, p. 15.

On the premise that the economic strength of Communist China is the least well known to the free world and, further, represents an essential element of world power status, this paper will seek to examine this area.

The accomplishments of China,<sup>3</sup> since the Communists took over in 1949, have been remarkable. She has risen from a huge but relatively backward country to one that today not only is the second most powerful Communist nation of the world but aggressively threatens the free world, the underdeveloped countries, and openly disagrees with the most powerful Communist state. Such a phenomenal transformation has caused the most powerful nations of the world to become increasingly apprehensive. China has called the United States a "paper tiger" and has threatened annihilation, should the US violate her borders. She has split with her critically needed ally, the USSR. She has ventured forth into Southeast Asia, Africa and Latin America. What sort of muscle does China have? Can she support such bravado? Can she seriously threaten the balance of power in the world? Can she become an industrial giant? These and many other questions concern the other nations of the earth and particularly the United States, because the United States has been identified as the enemy of China that must be destroyed.

As stated previously, this paper will attempt to measure and analyze the economic base of Communist China as a fundamental element

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<sup>3</sup>China used hereafter refers to the People's Republic of China.

of national power. While China has a vast multitude of economic problems and factors, it appears that the most significant and difficult to solve include the population problem, the agricultural shortages, the need for industrial development, and the ramifications of international trade. Each of these will be discussed herein as a basis for identifying the present economic base and for projecting the economic posture of China for the next ten years.

Additionally, an effort will be made to determine what courses of action China will or must take in the economic sense in the next decade.

Research conducted for this paper has involved over one hundred well-known and informed authors on Communist China. Every author without fail stated, in one form or another, that the lack of reliable data on the economics of China made it very precarious to arrive at "firm" conclusions. For example, Malcolm Stewart has stated: "The traditional unreliability of Chinese statistics complicates the task of arriving at reasonably accurate assessments and conclusions."<sup>4</sup>

The foregoing notwithstanding, this paper will seek to use the latest data from the most authoritative authors and to arrive at a meaningful expression of the economic base and its projection until 1975.

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<sup>4</sup>Malcolm Stewart, "Can Red China's Economy Sustain Her Drive for Big Power Status - and Tackle the United States - Now?," The Magazine of Wall Street, 12 Jun. 1965, p. 318.



## CHAPTER 2

### HISTORICAL PREVIEW

It is not the purpose of this chapter to provide a comprehensive history of China, as that would take many volumes. It is intended only to provide some insight into recent history that has a bearing on recent, current and future events that pertain to the economic development of Communist China. Even in this effort, many historical events will be omitted in an attempt to focus on the key factors.

#### PRE-1949

For over 2000 years prior to 1840, China's political systems, social structures and economic activity were remarkably unchanging. There were many upheavals, and rulers came and went in a process labeled the "dynastic cycle." Through it all, the force of Chinese tradition maintained the social and economic way of life.<sup>1</sup>

Over the centuries, the huge mass of peasants, poor and illiterate, struggled to survive and to provide the economic surplus upon which the state existed. Economically, China was overwhelmingly agricultural, with small-scale farming as its heart. As population increased rapidly during the eighteenth and nineteenth centuries, the shortage of land became very serious. This was the situation

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<sup>1</sup>A. Doak Barnett, Communist China in Perspective, pp. 8-9.

when, in the 1840's, a few small gunboats from the West forcibly entered China and ended her self-imposed isolation.<sup>2</sup>

After the intrusion in the 1840's from the West, modern transport and industry slowly began to appear and China's foreign trade developed on an unprecedented scale. Slowly, the makings of an industrial revolution developed.<sup>3</sup> A large measure of blame or credit goes to Britain, the United States, and France for breaking down the Closed Door of China.<sup>4</sup> It is reasonable to say that in the last century a commercial and industrial revolution, a political revolution, a scientific revolution, and an economic revolution had been developing simultaneously in China.<sup>5</sup>

While troubles continued in China and periodic chaos existed, the devastating blow was the beginning of the Sino-Japanese War in 1937. With it came invasion, destruction and general disruption. By war's end, eight years later (1945), the Nationalist Government was in a shambles. The economic situation had badly deteriorated. Inflation had set in. With some simplification, it can be said that Chiang Kai-shek and his Nationalist Government could not meet the crises, and Mao Tse-tung consolidated his "country-side" forces and displaced the government.<sup>6</sup>

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<sup>2</sup>Ibid., p. 11.

<sup>3</sup>Ibid., p. 3.

<sup>4</sup>O. Edmund Clubb, Twentieth Century China, p. 12.

<sup>5</sup>A. Doak Barnett, Communist China in Perspective, p. 4.

<sup>6</sup>Ibid., pp. 20-23.

It was in this state of chaos that the Communists took over in October 1949.

1949 - 1952

Immediately following the Communist take-over of the government in October 1949, the regime pursued the real sources of power and influence. All pockets of armed resistance were removed; the smallest stores of firearms were carefully and thoroughly rounded up; the police were brought firmly under the administration's control; and, the press and all means of mass communication became a state monopoly.<sup>7</sup>

Of next importance in the "Period of Restoration" was the achievement of economic stability and the restoring of the previously existing productive capacity. By harsh measures, inflation was halted. Transportation facilities were restored, and domestic trade was resumed. These measures did not solve all the chaos but they were the beginning of stability, and they assisted the recovery of both agriculture and industrial output.<sup>8</sup>

The Communists fully and completely realized that economic strength was a prerequisite for political power, and they accordingly planned to achieve the economic modernization of China.<sup>9</sup> They also were aware that the agricultural base must be restored and that

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<sup>7</sup>W. W. Rostow, The Prospects for Communist China, p. 63.

<sup>8</sup>A. Doak Barnett, Communist Economic Strategy; The Rise of Mainland China, p. 6.

<sup>9</sup>O. Edmund Clubb, The International Position of Communist China, The Hammarskjold Forums, p. 9.

industry capable of meeting the needs of the nation and a first-rate military power were essential if China was to become a great power. Significant to these ambitions, Mao Tse-tung recognized that help was needed. Between December 1949 and March 1950, Mao negotiated a treaty of political and military alliance and subsidiary economic agreements with the USSR. These agreements set the pattern for China to "borrow strength" from the USSR during China's period of weakness.<sup>10</sup>

Fortified with Soviet agreements, Mao, in June 1950, planned the period of reconstruction to last through 1952. As history has borne out, this estimate worked out sufficiently to permit the "First Five Year Plan" to be undertaken in 1953.

On 28 June 1950, the Communists spelled out the Land Reform Law. It was one of the first steps in organizing Chinese society under an unprecedented degree of central authority which reached down to every family in the villages.<sup>11</sup> It provided that land, draft animals, farm implements, surplus grain, and surplus housing of landlords would be confiscated for redistribution. There was to be a leveling down of rich peasants and a leveling up for the poor peasants. As a consequence, an equalization of land tenure among the agricultural population left each family (averaging five mouths) in possession of about two and one-half acres of cultivable land.<sup>12</sup>

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<sup>10</sup>O. Edmund Clubb, Twentieth Century China, p. 316.

<sup>11</sup>Rostow, op. cit., p. 88.

<sup>12</sup>O. Edmund Clubb, Twentieth Century China, p. 319.



This first phase of land reform resulted in:

Development of Land Redistribution Program in China<sup>13</sup>

<u>Period</u>	<u>Rural Population Affected (in millions)</u>	<u>Rural Population to be Affected (in millions)</u>
June 1950	145	264
February 1951	276	133
September 1951	319	90
September 1952	379	30
November 1952	420	5

It is apparent that for all practical purposes land reform had been completed by the end of 1952, and the land of the large land owners had been redistributed to the peasants.

During this process, mutual aid teams (in which peasants combined to help each other in busy agricultural seasons) were established and "agricultural producers cooperatives" were introduced.

It was obvious that "land reform" was leading to the next stage of the program--collectivization.

Of major historical interest and economic impact was China's entry into the war in Korea in October 1950. While there is no question but that the Soviet Union provided considerable military assistance, the 1950-1952 war effort was a severe strain on China's economy.<sup>14</sup> The budget for 1950, for example, allocated 39% of total government outlays to the military. The regime attempted to cover the war costs at the expense of consumer income and savings rather

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<sup>13</sup>Rostow, op. cit., p. 81.

<sup>14</sup>Ibid., p. 68.

than cutting down on investments, administration and other high priority expenditures.<sup>15</sup>

Significant also during the 1949-1952 period was Soviet aid. The USSR provided low interest loans rather than free grants-in-aid. For example, in 1950, the USSR loaned \$300,000,000 at 1 per cent interest to be repaid over a five-year period.<sup>16</sup> While the assistance was only a fraction of what China really needed, it did help, along with Soviet technicians, in re-establishing and restoring industrial capacity, mostly in Manchuria.

One can say that the initial period (1949-1952) of the Communist regime was a major effort at transformation in Chinese society designed both to guarantee full control by the Communist leaders in the short run and to bring about social and political changes which were believed to guarantee such control over the long pull.<sup>17</sup> While major strains were imposed on the economy by the Korean War, economic output did climb toward prewar levels. By 1952, the Chinese Communists claimed that overall industrial production in 33 major products had risen 26 per cent above previous peaks--16 per cent in capital goods and 32 per cent in consumer goods. Not all claims have been borne out by history, but by the

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<sup>15</sup>Ibid., p. 73.

<sup>16</sup>T. J. Hughes, and D. E. T. Luard, The Economic Development of Communist China, 1949-1960, p. 79.

<sup>17</sup>Rostow, op. cit., p. 61.

end of 1952 they were ready to embark upon a program of industrial expansion and to make preparations for their First Five Year Plan.<sup>18</sup>

Achievements had been remarkable.

FIRST FIVE YEAR PLAN  
1953 - 1957

In 1952, the Communist regime considered their progress to that date sufficient to prepare for the First Five Year Plan. By 1953, the regime had made basic decisions decreeing that economic growth would be sought by a ruthless concentration of effort in the heavy industry sector of the economy.<sup>19</sup> However, the scope and character of the plan was dependent upon the kind and amount of assistance which could be obtained from the USSR. Mao Tse-tung negotiated in Moscow in late 1952 and early 1953 with the result that the Russians agreed to finance extensive "projects," mostly in industrial assistance and technical aid.<sup>20</sup>

When the plan officially got underway in 1953, the regime had no specific long-range plans but they proceeded on a series of one year plans. It was mid-1955, after the truce in Korea and more detailed aid agreements with Russia were accomplished, before Peking published the goals and targets of the First Five Year Plan.<sup>21</sup> The

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<sup>18</sup>A. Doak Barnett, Communist Economic Strategy; The Rise of Mainland China, p. 6.

<sup>19</sup>Rostow, op. cit., p. 56.

<sup>20</sup>A. Doak Barnett, Communist Economic Strategy; The Rise of Mainland China, pp. 25-26.

<sup>21</sup>Ibid., p. 7.

main principles of the plan included the stress on the rapid growth of heavy industry; growth of the capital goods industries; agriculture should be oriented to providing adequate supplies; labor productivity should increase more than wages to ensure accumulation of capital; and new industrial centres should be established close to raw material supplies.<sup>22</sup> Clearly, the principles were heavily tilted toward industrialization. With about two-thirds of state investment scheduled into industry (initially on 156 Russian designed and equipped projects) industrial production was supposed to double in five years.<sup>23</sup>

The primary focus of national life in China was on the fulfillment of The Five Year Plan. This was outlined in 1952 by the regime as their twin goals of "socialization and industrialization."<sup>24</sup>

The targets and the claimed achievements of the First Five Year Plan have been reported as follows:<sup>25</sup>

First Five Year Plan: Targets and Claimed Achievements  
(percentage increases)

	<u>1st Plan Target</u> <u>1957 over 1952</u>	<u>Claimed</u> <u>1st Plan Achievements</u> <u>1957 over 1952</u>
National income	N.A.	54
Per capita national income	N.A.	38

NOTE: N.A. means not available.

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<sup>22</sup>Hughes, and Luard, op. cit., pp. 38-39.

<sup>23</sup>Werner Klatt, ed., The Chinese Model, p. 72.

<sup>24</sup>A. Doak Barnett, Communist Economic Strategy; The Rise of Mainland China, p. 7.

<sup>25</sup>"China," The World Almanac, 1965, p. 88.



	1st Plan Target <u>1957 over 1952</u>	Claimed 1st Plan Achievements <u>1957 over 1952</u>
Gross output--agriculture and industry	51.1	64
Gross agricultural output	23.3	24.7
Gross industrial output	98.3	118.9
Grain output	17.6	19
Modern industry output	104.1	132.5
Capital goods output	126.5	204.3
Consumer goods output	79.7	85.1
Increase in workers wages	33	37

In spite of the achievements claimed above, the Communist regime recognized that full industrialization would require 40 to 50 years before China could become "a powerful country with a high degree of socialist industrialization."<sup>26</sup>

The priority in the First Five Year Plan was clearly for "capital construction." The budget outlay during 1953-57 included investments in that area exceeding \$18 billion or over \$3 billion annually over the five years. Of this, 58.2 per cent was allocated for industry (\$9.3 billion for heavy industry and \$1.2 billion for light industry). By contrast, only \$1.4 billion of "capital construction" funds were to go to agriculture, forestry, and water conservation.<sup>27</sup>

In spite of many difficulties, China's First Five Year Plan was a considerable success--even though targets were not fulfilled to

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<sup>26</sup>A. Doak Barnett, Communist Economic Strategy; The Rise of Mainland China, p. 7.

<sup>27</sup>Ibid., p. 8.

the degree claimed. The Manchurian industrial complex had been much enlarged and new industrial centers were being constructed elsewhere.<sup>28</sup> Almost all of the industrial construction was undertaken with Russian "loans," technical assistance and complete plant shipments from the USSR. Nonetheless, a substantial industrial base was achieved. Through such massive concentration and investment in the industrial development, China hoped to boost the national income by over 7 per cent each year.<sup>29</sup>

Two other points of historical interest and economic impact are, first, the rapid rate of economic growth during the plan period did not result in rapid improvement in the welfare of the population and, second, the regime undertook to nationalize industry. This program was undertaken slowly but in 1956 they converted about 70,000 private industries, including about 90 per cent of those not already under state ownership, into "joint state-private enterprises." This all but eliminated private industry in Communist China.<sup>30</sup>

In 1957, Peking asserted that, based on the apparent success of the First Five Year Plan, in the next five years ahead it hoped to raise national income by about 50 per cent and to maintain an annual rate of increase of close to 9 per cent.<sup>31</sup>

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<sup>28</sup>Klatt, op. cit., p. 71.

<sup>29</sup>Ibid.

<sup>30</sup>A. Doak Barnett, Communist Economic Strategy; The Rise of Mainland China, pp. 13-19.

<sup>31</sup>Ibid., p. 13.

### THE "GREAT LEAP FORWARD"

Because of the overall strides made in the First Five Year Plan, particularly in industry, and with fairly good crop years behind them, the Communist Party leaders threw caution to the winds (and also the advice of their own economic experts) and announced the "Great Leap Forward." In 1958, the regime went all out for maximum increase of output in all sectors of the economy. They decided to mobilize all possible manpower to support the economic program. The commodities for concentrated effort were grain, cotton, coal and steel. Maximum production was to be the strategy of the "Great Leap."<sup>32</sup>

Peking set immense goals for 1959 and soon started carrying out the "communization" of all China--one of the most radical political, economic and social reorganizations ever attempted.<sup>33</sup> The first commune was named "Sputnick" and was established in Honan Province in April 1958. In August 1958, all China was ordered to adopt the communal system. In one of the most revolutionary social movements in history, the 740,000 cooperatives that had been previously established were amalgamated into 24,000 communes by 1959. Each commune, on the average, comprised 10,000 acres, 5000 households

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<sup>32</sup>William W. Hollister, Estimates of the Gross National Product, 1958-1959, p. 20.

<sup>33</sup>A. Doak Barnett, Communist Economic Strategy; The Rise of Mainland China, p. 42.

with an effective labor force of 10,000 each.<sup>34</sup> In addition to this great effort of organizing communes, the regime promoted an extensive program for "backyard furnaces." Steel production was to be the leading link in its Great Leap Forward. Two million crude iron-smelting furnaces were built or rebuilt in late 1958 so that the peasants could produce iron after completion of their normal work shifts. In the long run, this abortive act proved detrimental to the economy because the production was of generally unusable quality.<sup>35</sup>

At the outset of the Great Leap Forward, as it was launched in 1958, it was Communist China's announced intent to overtake Britain in total industrial output within fifteen years.<sup>36</sup> In August 1959, after a secret meeting in Kiangsi Province, the Chinese Communist Party had to admit that the production data for 1958 was in fact considerably overstated and that this fact shattered the optimism that had generated the "Great Leap."<sup>37</sup> Just prior to this conclusion, Chou En-lai had published A Great Decade extolling the extraordinary and amazing progress in all aspects of Chinese society during the 1949-1959 decade.<sup>38</sup> The great collapse was imminent. The fact that Communist China's "Great Leap Forward" collapsed, starting in 1958 and hitting bottom in 1960, is very well known. Such a drastic reversal of the progress they had made since 1949

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<sup>34</sup>O. Edmund Clubb, Twentieth Century China, p. 356.

<sup>35</sup>Klatt, op. cit., p. 87.

<sup>36</sup>Ibid., p. 80.

<sup>37</sup>Southeast Asia Treaty Organization, The Great Leap Forward?, p. 3.

<sup>38</sup>Chou En-lai, The Great Decade, entire issue.



has many and diverse reasons; however, two important areas can be identified as contributing in a major way to the setback so humiliating to the Communist leadership.

First, and probably of gravest impact, was the serious reduction in grain output primarily in 1958 to 1960. Actually, grain output in 1956 and 1957 was only mediocre and then the shortage of grain was compounded by natural disasters. In the following three years, China was left very near starvation levels. Weather alone was not responsible. The regime during this period provided inadequate production incentives for the peasants; it organized, reorganized and disorganized the peasant control structure (communes); and many planning errors, often gross in nature, were made at all levels of government control.<sup>39</sup>

Second, Communist China's industry came to a relative stand still. The prolonged agricultural crises affected the industrial sector in a number of ways. It led to a reduction of grain rations of the industrial worker, thus reducing his productivity; it accentuated the shortage of raw materials for light industry; it compelled Peking to use precious foreign exchange to purchase grain instead of capital equipment; and it required the transfer of labor back to agriculture (by 1961, some 20 million had been sent back).<sup>40</sup> The Sino-Soviet split in 1960 resulted in the sudden withdrawal of all

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<sup>39</sup>Alexander Eckstein, "On the Economic Crisis in Communist China," Foreign Affairs, Jul. 1964, p. 243.

<sup>40</sup>Klatt, op. cit., p. 91.

Soviet technicians and advisers in late 1960. Furthermore, the USSR withdrew plans and blueprints and refused to ship complete plant sets to China as previously scheduled. They also refused to ship essential parts for plants nearing completion or in operation.<sup>41</sup> The Russian withdrawal of aid in the industrial area involved 1400 specialists and affected 343 contracts and 257 items of scientific and technical cooperation.<sup>42</sup> This action had a devastating impact on China and, no doubt, caused the regime to reflect on the importance of Russia's assistance.<sup>43</sup>

In 1961, two fundamental problems faced the Communist regime: first, the steady growth of the huge population; and, second, the unfavorable industrial balance of payments which was restricting the imports of capital goods necessary for further industrial expansion.<sup>44</sup> This meant that new policies of significant magnitude were required. At the Ninth Plenary Session of the Eighth Central Committee of the Chinese Communist Party, held in 1961, a decision was made to reduce capital construction in heavy industry and to focus on agriculture. This policy led to the close down of many factories, the return of private initiative in agriculture and the development of selected industries serving agriculture.<sup>45</sup> Of particular importance was the "incentive" approach for the peasants. This innovation was a decisive

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<sup>41</sup>A. Doak Barnett, Communist China in Perspective, p. 84.

<sup>42</sup>Yuan-li Wu, "Communist China's Economy: Critical Questions," Current History, Sep. 1965, p. 167.

<sup>43</sup>Hughes, and Luard, op. cit., p. 85.

<sup>44</sup>A. Doak Barnett, Communist China in Perspective, p. 59.

<sup>45</sup>Klatt, op. cit., p. 91.

triumph for the people and it has had far-reaching social and political implications. It shows recognition by the regime that the only way out of the agricultural crisis lies not in pressure but in stimulating the peasants. Furthermore, the regime returned small private plots to families.<sup>46</sup>

Communist China, since late 1961, has aimed at balancing her economy rather than toward grandiose schemes and has moved with extreme care and deliberation.<sup>47</sup> Such a course appears to have been rewarded. Since 1962, the harvest has improved as well as the general economy; however, much always depends on the amount and quality of each year's grain production.<sup>48</sup>

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<sup>46</sup>H. F. Schurmann, "Peking's Recognition of Crisis," Problems of Communism, Vol. X; Sep.-Oct. 1961, p. 12.

<sup>47</sup>Ibid., pp. 13-14.

<sup>48</sup>Eckstein, op. cit., p. 249.

## CHAPTER 3

### POPULATION

People! One billion "people" by the year 1981. One billion mouths to feed . . . one billion jobs to find . . . one billion to house. This is the magnitude of the tasks facing the Communist Chinese in the not too distant future.

It is the purpose of this chapter to measure "the people" of Communist China and to project, as accurately as possible, the population problem as it has existed in the recent past, as it exists today, and what it will be in the foreseeable future.

For centuries, traditional Chinese society has been firmly based on the "family." Almost from the beginning of the Communist take-over of the government in 1949, Communist leaders have attempted to make a fundamental transformation in the family attitudes. The Communists, being realists, are not trying to eliminate the family. They realize that there are certain essential roles that only the family can play, even in a Communist society. They have tried for years, however, and are trying as rapidly as possible today to minimize the family's functions and to subordinate those functions to other political and economic institutions. The Communist regime is also attempting, with some success, to create a new generation whose loyalties to the Party and the state will be strong enough to take precedence automatically over family loyalties.<sup>1</sup> One of the more

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<sup>1</sup>A. Doak Barnett, Communist China in Perspective, p. 34.



successful aspects of modifying the family structure has been the movement to push women out of the home and into public life--into political, economic and social activities of all sorts. While this effort has compounded the problem of unemployment of men, it has disrupted the ancient position of women as intended by the regime.<sup>2</sup>

While changes in the social structure will continue to occur, the most important consideration for this study is how many people are there in China now and how many will there be? Throughout history these questions have confounded experts and the Chinese alike. A sample of the confusion as to population totals may be found in a statement by Malte Brun in 1810.<sup>3</sup>

Among the different accounts respecting China how shall we hit upon the true one? Has the country 27,000,000 inhabitants according to Sonnerat?, or 55,000,000 according to the extract from the Official Gazette of Peking?, or 70,000,000 according to the Russians?, or 100,000,000 as de Guignes believed?, or 19,662,000 as Mr. Buesching informs us?, or 200,000,000 agreeable to the statement of missionaries?, or finally 333,000,000 as a Chinese mandarin, perfectly veracious no doubt, assured Lord Macartney?

The confusion has continued. In 1900 the Imperial Government reported a total of 440,000,000. In 1922 missionary reports showed 441,000,000. In 1926 post office data showed 485,508,838. In 1931 the Ministry of Interior reported 474,000,000, and in 1938 set the total at 472,508,216.<sup>4</sup> So it has gone over the years. The simple

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<sup>2</sup>Ibid., p. 35.

<sup>3</sup>George B. Cressey, Land of the 500 Million, p. 6.

<sup>4</sup>Ibid., p. 7.

truth is that no one really knew and there is some doubt that they even know today.

#### THE 1953 CENSUS

The first--and, to date, the only--official Communist census, dated 30 June 1953, disclosed a figure of 582.6 million.<sup>5</sup> With adjustments for a mid-year population reading, this comes out to a total of approximately 581,000,000 for Communist mainland China.<sup>6</sup>

Hundreds of demographers and scholarly authorities on China have questioned the validity of the census, mostly on the basis of the manner in which it was conducted. Many say the total is overstated, as many more say that it is understated.

For example, George B. Cressey in 1955 stated that the census was probably inaccurate and on the high side, thus the title of his book Land of the 500 Million.<sup>7</sup> In 1963, Mr. Cressey accepted, with reservation, the 1953 census of 582 million as being a usable figure.<sup>8</sup> Mr. A. Doak Barnett, in 1962, recognized the census but concluded that mainland China's population was about 580 million.<sup>9</sup> In Population Bulletin, 1963, Robert C. Cook, editor, accepted a figure of 583 million.<sup>10</sup> W. W. Rostow, in 1953, estimated about

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<sup>5</sup>W. A. Douglas Jackson, "The Chinese Population Problem," Current History, Sep. 1962, p. 156.

<sup>6</sup>Yuan-li Wu, and others, The Economic Potential of Communist China, p. 15.

<sup>7</sup>George B. Cressey, Land of the 500 Million, p. 10.

<sup>8</sup>George B. Cressey, Asia's Lands and Peoples, p. 63.

<sup>9</sup>A. Doak Barnett, Communist China in Perspective, p. 62.

<sup>10</sup>Robert C. Cook, ed., "China: A Demographic Crisis," Population Bulletin, Aug. 1963, p. 112.

600 million.<sup>11</sup> One can compile a lengthy list of experts favoring a higher population total for 1953 than 582.6 million; however, one can also compile an equally lengthy list of experts favoring a lower total. Of significance to this writer is the fact that most "studies" by the experts have varied only slightly above or slightly below the Communist census figure.

In late 1953, China conducted a sample survey check on the accuracy of the census. The sample included a 53 million population or about 9.2 per cent of the total population in 343 counties and cities in 23 provinces, plus 5 other cities and one autonomous area. Their conclusion was that the census was amazingly accurate.<sup>12</sup> While there are still many who argue with the census of 1953 and the sample check, we are compelled, for lack of better data, to fall back on the Chinese census, with minor adjustments, as a starting point.<sup>13</sup> As a matter of fact, there were no indications that in 1953-1954 Peiping saw any propaganda advantage in distorting the population count.<sup>14</sup> Predicated on the foregoing, this study will use a mid-year total population figure for mainland Communist China of 581 million in 1953.

While not bearing directly on this study, it is worth noting that there are about 15 million Chinese overseas. They represent a

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<sup>11</sup>W. W. Rostow, The Prospects for Communist China, p. 322.

<sup>12</sup>Helen Yin, and Yi-chang Yin, Economic Statistics of Mainland China, 1949-1957, p. 8.

<sup>13</sup>Jackson, op. cit., p. 157.

<sup>14</sup>Milbank Memorial Fund, Population Trends in Eastern Europe, The USSR and Mainland China, p. 97.

built-in Fifth Column to facilitate implementation of programs for expansion of Chinese influence.<sup>15</sup> This aspect will not be pursued further in this paper; however, its significance in future world events must not be overlooked.

#### POPULATION GROWTH RATES AND PROJECTION

Having arrived at a usable figure of 581 million people in Communist China as of 1953, it next becomes important to determine the annual growth rate. This, of course, involves a determination of the annual birth rate as counterbalanced by the death rate. Here again precise data is not available.

At the outset, it is very important that one recognizes that birth and death rates fluctuate widely. The former by effective birth control; the latter by such things as famines, disease epidemics, wars, floods, typhoons, etc.<sup>16</sup> Assuming relatively normal conditions, however, a usable set of rates can be arrived at.

Based on a study of 30,000,000 people during the Communist Chinese census of 1953, the regime announced in 1954 an annual birth rate of 37 per 1000 as compared with an annual death rate of 17 per 1000. This results in a net gain of 20 per thousand or an annual growth rate of 2 per cent per year.<sup>17</sup> The 2 per cent per year, as concluded by the census, has been disputed by many authorities,

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<sup>15</sup>O. Edmund Clubb, The International Position of Communist China, The Hammarskjold Forums, p. 12.

<sup>16</sup>George B. Cressey, Land of the 500 Million, p. 10.

<sup>17</sup>Ibid., p. 10.



either on the basis that it is too low or on the basis that it is too high. At the same time, there are many authorities that accept the 2 per cent as a useful indicator, recognizing that future circumstances can readily alter it.

Dr. Chandrasekhar obtained the following data from a Communist Chinese official. While the reliability can be questioned, the chart illustrates the fluctuations that can take place.<sup>18</sup>

(Per 1000 population)

<u>Year</u>	<u>Birth Rate</u>	<u>Death Rate</u>	<u>Natural Increase</u>	<u>Growth Rate %</u>
1953	37	17	20	2
1954	37	13	24	2.4
1955	35	12.4	22.6	2.26
1956	32	11.4	20.6	2.06
1957	34	11	23	2.3

The low death rate shown after 1953 is suspect; however, improved medical service during the period would have a tendency to reduce the death rate.

In a similar view, a study by the Milbank Memorial Fund found growth rates varying from 1.9 per cent in 1949 to 2.34 per cent in 1954.<sup>19</sup> In the opposite direction, W. W. Rostow concluded that the population would grow at only 1.2 per cent per year.<sup>20</sup> Significant, however, is the number of authorities that have found the 2 per cent

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<sup>18</sup>S. Chandrasekhar, Communist China Today, p. 123.

<sup>19</sup>Milbank Memorial Fund, Population Trends in Eastern Europe, The USSR and Mainland China, p. 120.

<sup>20</sup>Rostow, op. cit., p. 280.

growth rate useful. Among these are Barnett,<sup>21</sup> Wu,<sup>22</sup> Population Bulletin,<sup>23</sup> Jackson,<sup>24</sup> Cressey,<sup>25</sup> and many others.

As a useful tool for this study and others that must use total population as a factor, the following projection has been prepared:

Communist China Population Projection  
(in millions)

<u>Year</u>	<u>Growth Rate 1.7%</u>	<u>Growth (a) Rate 2.0%</u>	<u>Growth Rate 2.3%</u>
1953 <sup>(b)</sup>	581	581	581
1954	591	595	594
1955	601	608	608
1956	611	621	622
1957	621	637	637
1958	632	654	654
1959	643	668	669
1960	654	682	685
1961	665	694	701
1962	676	705	717
1963	687	715	733
1964	699	726	750
1965	711	737	767
1966	723	750	785
1967	735	764	803
1968	747	779	821
1969	760	795	840
1970	773	811	859

NOTES: (a) Population rates adjusted for known factors that affected population 1954 through 1963.<sup>26</sup> Then projected at 2%.

(b) Population concluded at the beginning of this chapter.

<sup>21</sup>A. Doak Barnett, Communist China and Asia, p. 54.

<sup>22</sup>Yuan-li Wu, An Economic Survey of Communist China, p. 19.

<sup>23</sup>Cook, op. cit., p. 112.

<sup>24</sup>Jackson, op. cit., p. 157.

<sup>25</sup>George B. Cressey, Asia's Lands and Peoples, p. 63.

<sup>26</sup>Wu, and others, op. cit., p. 15.

<u>Year</u>	<u>Growth Rate 1.7%</u>	<u>Growth Rate 2.0%</u>	<u>Growth Rate 2.3%</u>
1971	786	827	879
1972	799	844	899
1973	813	861	920
1974	827	878	941
1975	841	895	963
1976	855	913	985
1977	869	932	1007
1978	884	950	1030
1979	899	969	1054
1980	914	989	1078
1981	930	1008	1103

As a measure of correlation with other authorities, Population Bulletin estimated the population at "over 700 million" in 1963;<sup>27</sup> Chou En-lai referred to 650 million people in 1959;<sup>28</sup> The World Almanac lists the UN estimate for 1960 at 686 million;<sup>29</sup> Cheng Chu-yuan estimated 635 million in 1957;<sup>30</sup> Helen and Yi-chang Yin estimated 621 million in 1956;<sup>31</sup> and S. Chandrasekhar estimated for 1966 a total of 770 million.<sup>32</sup> The correlation with the foregoing chart appears well within acceptable limits, consequently this study will henceforth use the 2 per cent projection for sake of simplicity. It must be borne in mind, however, that unknown variables inject a degree of risk in the use of the figures. The figures shown in the tabulation are considered to be the most current available to date.

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<sup>27</sup>Cook, op. cit., p. 109.

<sup>28</sup>Chou En-lai, A Great Decade, p. 36.

<sup>29</sup>"China," The World Almanac, 1965, p. 367.

<sup>30</sup>Chu-yuan Cheng, Communist China's Economy, 1949-1962, p. 109.

<sup>31</sup>Yin, and Yin, op. cit., p. 4.

<sup>32</sup>Chandrasekhar, op. cit., p. 151.

## BIRTH CONTROL

A discussion of Communist China's tremendous population and the threat of a billion people around 1980 would be incomplete without a word about birth control measures. The traditional official Communist line with respect to population has claimed that overpopulation is a myth generated by Malthusian reactionaries to conceal the true cause of human misery, namely capitalism. The theory notwithstanding, the regime in 1957-1958 ignored its doctrine and carried out an active campaign against high birth rates in newspaper editorials.<sup>33</sup> The main theme of this effort was to encourage late marriages. It was advocated that women should marry between 23-25 years of age, and men between 25-29 years.<sup>34</sup> The effort was not very successful and in late 1958 the Communists pulled back from birth control efforts, probably to provide manpower for the "Great Leap Forward."<sup>35</sup>

Since early 1962 the press in China has once again taken up the subjects of birth control, vasectomy, and delayed marriages, this time with greater emphasis on delayed marriages than previously.<sup>36</sup> Success of such efforts is extremely doubtful. Experience elsewhere in the world indicates that birth control measures are only effective in advanced societies where literacy is high.<sup>37</sup> Furthermore,

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<sup>33</sup>Jackson, op. cit., p. 159.

<sup>34</sup>Cheng, op. cit., p. 171.

<sup>35</sup>O. Edmund Clubb, Twentieth Century China, p. 403.

<sup>36</sup>Cook, op. cit., p. 135.

<sup>37</sup>Cheng, op. cit., p. 171.



in most of China, farming is dependent on a high application of human effort to the land. Since human hands are his main capital, the farmer has no economic incentive to reduce the size of his family.<sup>38</sup>

If the present growth rate of the population in China continues at or near 2 per cent per year, the drag exercised by population growth on economic development will remain extreme, especially if food must be imported at the expense of industrial requirements.<sup>39</sup>

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<sup>38</sup>George E. Taylor, "Lin Piao and the Third World," The Virginia Quarterly Review, p. 7.

<sup>39</sup>Yuan-li Wu, "Communist China's Economy: Critical Questions," Current History, Sep. 1965, p. 169.

## CHAPTER 4

### AGRICULTURE

China remains a second-rate military power. This may suffice in Asia; it is not enough to enable it to wage war in the world arena.

The economic establishment is at the crux of the matter, and the critical economic factor is the country's agriculture.<sup>1</sup>

The purpose of this chapter is to seek some measure of China's agricultural problem. How much does she produce? How much production is required in agriculture? What are the limitations on agricultural output? What can China do to increase harvest? These are the questions that impinge on the economic significance of the country's agriculture, and for which answers will be sought.

Because of agriculture's important position in the economy of China, a bumper harvest or a crop failure necessarily exerts an important effect on the rate of economic growth for the current or subsequent year.<sup>2</sup> Until such time as China can generate agricultural surpluses to offset the needs of a "poor crop year," the economy of China will be affected in direct proportion to the adequacy of each year's harvest.

Another point to bear in mind is the disruptions that have taken place in China's agricultural sector--the land redistribution program

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<sup>1</sup>O. Edmund Clubb, The International Position of Communist China, The Hammaraskjold Forums, p. 15.

<sup>2</sup>Chu-yuan Cheng, Communist China's Economy, 1949-1962, p. 129.

of 1950-1952 and the "communization" of the rural areas as discussed in Chapter 2. These programs adversely affected agricultural output as did natural disasters; however, they also forced the regime to reorient their policies and give increased attention to improving the state of food production. Of major significance was the return of small plots to the farmers and the establishing of "incentives" for stimulating production.<sup>3</sup> It is widely recognized that the deterioration of peasant incentive and mismanagement of the communes are the most important factors causing the famines of 1960-1961.<sup>4</sup> As a result of returning private plots to the peasants, the production from these private plots produced as much as 20 per cent of the farm output, although they utilized only 5 per cent of the total land in many communes.<sup>5</sup>

It is also well to recognize that in 1956, 85 per cent of the population was rural<sup>6</sup> and in 1963 this figure was still over 80 per cent.<sup>7</sup>

#### ARABLE LAND

The area of Communist China is approximately 3,700,000 square miles as compared to Russia with 8,600,000 square miles and the

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<sup>3</sup>Charles Hoffmann, "Work Incentive Policy in Communist China," The China Quarterly, Jan.-Mar. 1964, p. 108.

<sup>4</sup>Cheng, op. cit., p. 51.

<sup>5</sup>Chao Kang, "Agriculture in China Today," Current History, Sep. 1965, p. 175.

<sup>6</sup>Helen Yin, and Yi-chang Yin, Economic Statistics of Mainland China, 1949-1957, p. 6.

<sup>7</sup>George B. Cressey, Asia's Lands and Peoples, p. 63.

United States with about 3,100,000 square miles.<sup>8</sup> The World Almanac credits China with an area of 3,760,000 square miles.<sup>9</sup> Other sources give measurements at approximately the same figures. Of the land mass of China, about 60 per cent is above 6000 feet elevation and cannot be considered suitable for agriculture. Another 20 per cent is unsuitable because of topography or climatic conditions. In 1953, there were about 250 million acres of wasteland, of which only about 4 per cent has been reclaimed.<sup>10</sup>

Estimates of the total arable land in China vary slightly, depending on the source of data. For example, Dawson<sup>11</sup> estimates that 15 per cent of the land is arable, or 146 million hectares (362.7 million acres).<sup>12</sup> Cressey states that less than 12 per cent of the total area is arable.<sup>13</sup> China News Analysis states that 11.1 per cent is arable.<sup>14</sup> Of more precise interest to this study is the land under cultivation.

Rostow, in 1952, concluded that 240-250 million acres were under cultivation.<sup>15</sup> Hu estimated in 1958 that about 280 million acres were being cultivated,<sup>16</sup> although this appears a bit high.

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<sup>8</sup>George B. Cressey, Land of the 500 Million, p. 30.

<sup>9</sup>"China," The World Almanac, 1965, p. 367.

<sup>10</sup>Chang-tu Hu, China: Survey of World Cultures, p. 334.

<sup>11</sup>Owen L. Dawson, "China's Two-Pronged Agricultural Dilemma," Current Scenes, Vol. III, 1 Jun. 1965, p. 4.

<sup>12</sup>One hectare = 2.471 acres.

<sup>13</sup>George B. Cressey, Asia's Lands and Peoples, p. 108.

<sup>14</sup>"A Scientific Survey of Land Utilization," China News Analysis, 30 Apr. 1965, p. 4.

<sup>15</sup>W. W. Rostow, The Prospects for Communist China, p. 266.

<sup>16</sup>Hu, op. cit., p. 334.



Yin, in 1957, estimated 270 million acres.<sup>17</sup> Clubb alluded to over 250 million acres in 1958.<sup>18</sup> Dawson stated 271 million as of 1964.<sup>19</sup> Stanford Research Institute calculated 276 million acres in 1964,<sup>20</sup> a figure that will be used elsewhere in this study.

It is interesting to note that the area under cultivation on a per capita basis in 1940 was .45 acres<sup>21</sup> and in 1962 was down to .4 acres because of the rapid rise in population.<sup>22</sup> This figure compares to a per capita acreage of 2.01 in Russia and 8.04 in the United States.<sup>23</sup>

Most of the 276 million acres of land under cultivation are to be found in Eastern China and, even in this area, the arable land cannot all be considered good. For topographic and pedologic reasons, only 30 per cent of the area is superior; 40 per cent is of medium quality; while the rest is distinctly marginal.<sup>24</sup> Nonetheless, this eastern area sustains over 80 per cent of the mainland's population, thus giving rise to enormous rural densities. For example, in Szechwan Province, the density approaches 2500 persons per square mile.<sup>25</sup>

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<sup>17</sup>Yin, and Yin, op. cit., p. 26.

<sup>18</sup>O. Edmund Clubb, Twentieth Century China, p. 362.

<sup>19</sup>Dawson, op. cit., p. 4.

<sup>20</sup>Yuan-li Wu, and others, The Economic Potential of Communist China, p. 53.

<sup>21</sup>Cheng, op. cit., p. 22.

<sup>22</sup>Ibid., p. 169.

<sup>23</sup>Ibid., p. 22.

<sup>24</sup>W. A. Douglas Jackson, "The Chinese Population Problem," Current History, Sep. 1962, p. 157.

<sup>25</sup>Ibid.

The area not under cultivation is also of interest. If China could substantially increase productive farming acreage, she might well solve her food problem. Dawson estimates that there are 36 million hectares (99 million acres) of land that have some potential of reclamation, although with difficulty and perhaps not profitably. He further refines this estimate and states that 10 million hectares (25 million acres) could be cultivated and might produce 15 million metric tons of additional food grain.<sup>26</sup> Rostow, on the other hand, concludes that there are no more than 15 million acres that could be brought under cultivation.<sup>27</sup>

Cheng has concluded that most all of the so-called arable but uncultivated land is located in frontier regions where communications are poor and weather unfavorable. To cultivate one mou (one-sixth acre) would require \$30 in capital investment. To double the arable land area would take an investment of 44 billion US dollars. This cost is prohibitive at the present level of the Chinese economy.<sup>28</sup> Clubb states that the cultivated area lends itself most grudgingly to expansion, and that, with present technology, the limits of expansion have already been nearly reached.<sup>29</sup> In a similar view, Cressey has concluded that no great increase in the amount of cultivated land can be expected in the foreseeable future.<sup>30</sup> This

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<sup>26</sup>Dawson, op. cit., p. 4.

<sup>27</sup>Rostow, op. cit., p. 268.

<sup>28</sup>Cheng, op. cit., p. 169.

<sup>29</sup>O. Edmund Clubb, The International Position of Communist China, The Hammarskjold Forums, p. 15.

<sup>30</sup>George B. Cressey, Asia's Lands and Peoples, p. 115.

author has concluded that only slight increases in total cultivated land will be achieved in China in the next decade.

### PRODUCTION

Accurate and complete data on food grain production has not been available since the Communists took over in 1949. A number of authorities on China have made estimates over the years as a basis for their conclusions. A tabulation of four authoritative sources are shown below.

#### Estimated Food Grain Production (millions of metric tons)

<u>Year</u>	<u>Stanford Research Institute<sup>31</sup></u>	<u>Owen L. Dawson<sup>32</sup></u>	<u>Yin<sup>33</sup></u>	<u>O. Edmund Clubb<sup>34</sup></u>
1950	180			
1951	183			
1952 (a)	184	170	164	154
1953 (b)	180	↑	167	157
1954	177	(average)	170	
1955 (c)	184	( 177 )	184	174
1956	182	↓	182	
1957 (d)	185	185	185	185
1958 (e)	175			193
1959 (f)	154			168

NOTES: (a) Year of economic recovery.  
 (b) Beginning of 1st 5 year plan.  
 (c) Bumper crop.  
 (d) Last year of 1st 5 year plan.  
 (e) Year of "Great Leap Forward."  
 (f) Beginning of "readjustment."

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<sup>31</sup>Wu, and others, op. cit., p. 40.

<sup>32</sup>Dawson, op. cit., p. 3.

<sup>33</sup>Yin, and Yin, op. cit., p. 30.

<sup>34</sup>O. Edmund Clubb, The International Position of Communist China, The Hammarskjold Forums, pp. 16-17.

<u>Year</u>	<u>Stanford Research Institute</u>	<u>Owen L. Dawson</u>	<u>Yin</u>	<u>O. Edmund Clubb</u>
1960	130			150
1961	140			165
1962	160	185		182
1963	183	180		
1964	186	195		

The estimates shown in the preceding chart show some differences; however, major trends in agricultural output are clearly shown. For example, the failure after the "Great Leap Forward" is reflected in the estimates for 1959, 1960 and 1961. Of more interest to this study, however, is the correlation reflected from 1962 on. Specifically, the studies conducted by Stanford Research Institute and Owen L. Dawson will be used later in this paper.

Significant is the fact that current agricultural production is only slightly better than it was in 1957. Since the population has grown by some 90 million people over the eight year period, per capita farm output in China today is much worse than it was in 1957.<sup>35</sup>

Future agriculture production is precarious to the degree that floods, typhoons, natural calamities and poor policies on the part of the regime may adversely affect it. Weather, of course, is uncontrollable. Very little progress has been made on flood control. It is expected, however, that the regime will pursue reasonable policies in the agricultural area so as not to upset the present trend of increased production.

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<sup>35</sup>Kang, op. cit., p. 171.



## FERTILIZER - IRRIGATION - TRACTORS

Li Fu-chun, Chairman of the State Planning Commission, stated in April 1960:

In the field of agricultural mechanization, the target we are striving for is to achieve a small-scale solution in four years, beginning in 1959, and a medium-scale solution in seven years, and a large-scale solution in ten years.<sup>36</sup>

In 1965, the focus was expanded. The main Chinese priority was in the fertilizer and insecticide field, then in agricultural machinery such as tractors (still used on a very small scale), pumps, small diesel engines, and sprayers.<sup>37</sup> The Chinese have discovered that, while mechanization helps, it has a limited effect on raising farm output. Tractors render no help in resisting natural calamities. Even when weather is good, farm machines do not greatly increase output per unit of land except in the large wheat fields. In the hilly areas, plots are too small to warrant use of tractors.<sup>38</sup> Dawson has stated that the "basic" problem of getting more out of a set amount of cultivated land depends on conservation of water and adequate chemical fertilizer. He states the factors for increased yield are: organic fertilizer, 40 per cent; chemical fertilizer, 40 per cent; and improved techniques, 20 per cent.<sup>39</sup> The Chinese now agree that, under present conditions, the application of

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<sup>36</sup>Yuan-li Wu, The Economy of Communist China, p. 169.

<sup>37</sup>Colina MacDougall, "Industrial Upsurge," Far Eastern Economic Review, Vol. XLIX, 30 Sep. 1965, p. 608.

<sup>38</sup>Kang, op. cit., p. 172.

<sup>39</sup>Dawson, op. cit., pp. 4-6.

fertilizer is a surer way to raise farm output.<sup>40</sup> While mechanization contributes to farm output, this study will be primarily interested in the use of fertilizer.

As of 1964, there were some 70 modern chemical fertilizer plants with a current capacity of about 4 million tons per year. Chemical fertilizer production is tabulated as follows:

Domestic Production and Imports of Chemical Fertilizer<sup>41</sup>  
1952-1963  
(millions of metric tons)

<u>Year</u>	<u>Domestic Production</u>	<u>Imports</u>	<u>Total</u>
1952	.194	.139	.333
1953	.273	.470	.743
1954	.361	.650	1.010
1955	.426	.794	1.220
1956	.663	1.336	1.999
1957	.763	1.150	1.913
1958	.984	1.500	2.484
1959	1.333	1.000	2.333
1960	1.675	.786	2.461
1961	1.431	1.000	2.431
1962	2.050	1.150	3.200
1963	2.600	1.700	4.300

The Stanford Research Institute data shown above is supported by findings of Dawson:

Chemical Fertilizer Supplies in Communist China<sup>42</sup>  
(million metric tons)

<u>Year</u>	<u>Production</u>	<u>Imports</u>	<u>Total</u>
1961	1.4	.88	2.28

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<sup>40</sup>Kang, op. cit., p. 174.

<sup>41</sup>Wu, and others, op. cit., p. 34.

<sup>42</sup>Dawson, op. cit., p. 13.

<u>Year</u>	<u>Production</u>	<u>Imports</u>	<u>Total</u>
1962	2.1	1.00	3.10
1963	2.8	1.7	4.5
1964	3.5	1.2	4.7
1965*	4.0	2.0	6.0

\*Estimated.

Dawson further points out that even this rate of increase is not enough, and he estimates that 15 million metric tons of chemical fertilizer will be required by 1972.<sup>43</sup> The estimated requirements for chemical fertilizer will be discussed later in this paper.

The amount of land under cultivation that is presently irrigated amounts to slightly over 50 million hectares.<sup>44</sup> Potentially, some 18 million hectares could be brought under irrigation; however, it would take a long time in developing. Major progress in water control involves diverting surplus water from the Yangtze to the Yellow River basin. This would be a gigantic engineering feat and would take a few decades for results to appear.<sup>45</sup>

Mechanization in agriculture now involves over 100,000 tractors (15 horsepower units). If China intended to mechanize all agriculture, it would need 1.2 million tractors of 15 HP. Of these, 120,000 would wear out each year and need replacement. It is impossible for China to produce such a great quantity in the next decade.<sup>46</sup> The

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<sup>43</sup>Ibid., p. 6.

<sup>44</sup>Wu, and others, op. cit., p. 23.

<sup>45</sup>Dawson, op. cit., p. 10.

<sup>46</sup>Cheng, op. cit., p. 169.

use of tractors has not proved to be the best answer to increased yield per unit of land. Fertilizer has that role to perform.

This author recognizes that both irrigation and mechanization contribute to over-all increase in production and are important to China's future agricultural expansion. However, henceforth in this paper, these two elements will be treated as contributing in a slow but steady incremental way to increased food grain production.

#### FOOD GRAIN PROJECTION

Population increases are geometrical in progression, whereas food supply goes upward in arithmetic progression (Malthus Theory). It is mathematically impossible for agriculture to keep pace with China's population increase in the long run. With all possible scientific and technical applications, China might double agricultural output on the existing acreage but there are hard ultimate limits to the increased production that can be achieved on a given area of land.<sup>47</sup> In the "long run" this statement is true; however, of primary interest to this paper is the outlook for the next decade.

As a reasonable measuring element, it is useful to arrive at "How much food production is required to feed a person?" In 1939, the Chinese Medical Association set 2054 calories per day in a well balanced diet as the minimum maintenance level.<sup>48</sup> Of interest is

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<sup>47</sup>O. Edmund Clubb, Twentieth Century China, pp. 401-402.

<sup>48</sup>Dawson, op. cit., p. 6.



the fact that during the period 1931-1937 food per capita availability was about 2400 calories a day.<sup>49</sup> In 1960-1961 food consumption was only about 1900 calories and in 1963-1964 consumption was about 1950 calories per day.<sup>50</sup> The noticeable reduction was caused by increased population. To equate the minimum maintenance caloric requirement (2054 calories) to metric tons, Stanford Research states that a per capita factor of .279 metric tons annually of unprocessed grain at point of production is required.<sup>51</sup> Dawson arrived at a similar estimate.<sup>52</sup>

With the foregoing as a basis, the following tabulation can be made:

Ten Year Food Grain Projection<sup>53</sup>  
(estimated)

<u>Year</u>	<u>Mid-Year<sup>1</sup> Population In Millions</u>	<u>Food Grain<sup>2</sup> Requirement MMT</u>	<u>Food<sup>3</sup> Production MMT</u>	<u>Crop<sup>4</sup> Deficiency MMT</u>	<u>Chemical<sup>5</sup> Fertilizer Required MMT</u>
1965	737	206	188	21	11.2
1966	750	209	190	23	12.4
1967	764	213	191	26	14.0
1968	779	217	192	30	14.8

- NOTES: 1. See Chapter 3 (2% population projection).  
2. Population X .279 metric tons for minimum maintenance.  
3. Includes factor for irrigation and mechanization; assumes good weather.  
4. Deficiency applies to following year requirement.  
5. Required to produce crop deficiency. Equals 140 lbs. of chemical fertilizer per acre.

<sup>49</sup>Ibid., p. 3.

<sup>50</sup>Werner Klatt, ed., The Chinese Model, p. 116.

<sup>51</sup>Wu, and others, op. cit., p. 47.

<sup>52</sup>Dawson, op. cit., p. 6.

<sup>53</sup>Wu, and others, op. cit., p. 49.

Year	Mid-Year Population In Millions	Food Grain Requirement MMT	Food Production MMT	Crop Deficiency MMT	Chemical Fertilizer Required MMT
1969	795	222	194	32	16.4
1970	811	226	195	36	17.6
1971	827	231	196	39	18.8
1972	844	235	198	42	20.4
1973	861	240	199	46	
1974	878	245			

Any projection of this sort has perils. Perhaps the most significant ones are the assumptions that weather will be normal with no natural calamities taking place, and that the regime will continue reasonable agricultural policies, to include incentives for the peasants. Violation of either assumption will radically alter the projection. It is obvious, of course, that natural calamities cannot be controlled. Therefore, food grain production to that degree is in the hands of the Gods.<sup>54</sup>

The only way China can achieve increased production is by using the required amounts of fertilizer. A 1972 production of 20 million tons of chemical fertilizer will require major investments, first in imports and then in chemical fertilizer plants. The Chinese have undertaken such a program, but at their present investment rate they will not achieve their goal in this decade.<sup>55</sup> Other factors lead to the same conclusion. For example, the transportation system is inadequate for assembling raw materials.<sup>56</sup> The distribution and

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<sup>54</sup>"Good Years in Agriculture," China News Analysis, 19 Mar. 1965, p. 6.

<sup>55</sup>Cheng, op. cit., p. 170.

<sup>56</sup>Dawson, op. cit., p. 7.

transportation systems are totally inadequate to permit the farmers to receive such quantities of fertilizer even if they were available.<sup>57</sup> Another problem of vast proportions is the task of adequately teaching the peasants first to use fertilizer and second how to use it properly. Resistance to changing methods is high.

Many Chinese have expressed their feeling that agriculture production has already reached its physical ceiling under present conditions.<sup>58</sup> This point is disputed. Nonetheless, some Chinese officials recognize the critical outlook for agriculture. China is spending, during 1966, an estimated \$120 million to buy up all available supplies of chemical fertilizer on the world market, in addition to their making heavy purchases of fertilizer factories. Much of this effort simply enables China to keep pace with the population. There is still too little surplus to permit rapid industrial expansion.<sup>59</sup>

Until China can develop adequate sources of chemical fertilizer and regulated water supplies, the outlook is gloomy for meeting the expanding requirement for food grain.<sup>60</sup> Efforts to transform China into an industrial power could well be disrupted by a lack of capital unless increased exports of other products can offset the foreign exchange costs of the imports of grain and fertilizer.<sup>61</sup>

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<sup>57</sup>Yuan-li Wu, "Communist China's Economy: Critical Questions," Current History, Sep. 1965, p. 168.

<sup>58</sup>Kang, op. cit., p. 172.

<sup>59</sup>Charles Taylor, "China from Within," The Nation, 4 Oct. 1965, p. 181.

<sup>60</sup>Dawson, op. cit., p. 11.

<sup>61</sup>Ibid., p. 8.

## CHAPTER 5

### INDUSTRY

Ever since the Chinese Communists won their victory in 1949, they have been obsessed with the task of building China into a modern industrial power. After sixteen years, they are still dedicated to the ultimate goal of an industrial capacity that will permit them to take their place among world powers.<sup>1</sup>

Chapter 2 reviewed the historical progression of the Chinese Communists since achieving power in 1949 and identified the major advances and regressions in China since that date. Of major impact on China's industry have been the restoration of the industrial base--1949-1952: the First Five Year Plan (1953-1957), which was specifically oriented to building up industry; the loans, the complete plant shipments, the furnishing of technicians and industrial supplies from the USSR; the complete nationalization of private industry in 1956; the sudden withdrawal of all Soviet technicians and industrial assistance by the USSR in 1960; and the regression caused by the failure of the Great Leap Forward.

Perhaps the most important contribution to the development of China's industry was the supply of complete sets of equipment and technical aid by the USSR for a number of large industrial projects.

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<sup>1</sup>Charles Taylor, "China from Within," The Nation, 4 Oct. 1965, p. 181.



During the period 1950 to 1957, some 211 major projects were agreed on; however, they were subsequently consolidated to 166 projects. In 1958 an additional 47 major projects were added, and in 1959 another 78 were added. Total major projects amounted to 291, not including 60 separate workshops and important installations. It was this assistance that has formed the base of modern industry in China.<sup>2</sup> The sudden withdrawal of Russian assistance in late 1960 and its subsequent effects prompted this statement in The People's Daily in 1963:<sup>3</sup>

In July 1960, the Soviet authorities . . . suddenly and unilaterally decided on the complete withdrawal of the 1,390 experts who were in China to help in our work, they tore up 343 contracts for experts and the supplements to those contracts and abolished 257 items for scientific and technical cooperation and since then, they have reduced in large numbers the supplies of sets of equipment and key sections of various other equipment. This has caused our construction to suffer huge losses, thereby upsetting our original plan for the development of our national economy and greatly aggravating our difficulties.

This sudden act on the part of Russia will not soon be forgotten by the Chinese nor will its complete economic impact be eliminated very soon.

Recovery from the loss of technicians, engineers, equipment sets, and etc., has been long and difficult. China's research work on new machinery products and their design and manufacture have shown

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<sup>2</sup>Choh-ming Li, "China's Industrial Development, 1958-63," The China Quarterly, Jan.-Mar. 1964, p. 30.

<sup>3</sup>Ibid., p. 32.

improvement recently. The Chinese are now producing certain high class, large model and sophisticated machines. This production has enabled the Chinese to achieve more than 70 per cent self-sufficiency in the supply of machine equipment. They have also recently regained their capability to manufacture such heavy weapons as tanks, artillery, and war vessels below 1000 tons.<sup>4</sup>

With the foregoing discussion of industrial development in China, it is well to turn to the real purpose of this chapter. On the premise that industrial might must rest heavily on basic natural resources and basic industries, this paper will examine natural resources in China and the basic industries of coal, iron, and oil.

#### NATURAL RESOURCES

China's future material prosperity and political strength are closely related to the availability of raw materials for industry.

#### China's Mineral Sufficiency<sup>5</sup>

<u>Surplus for Export</u>	<u>Adequate for Needs</u>	<u>Apparently Deficient</u>
Antimony	Aluminum	Chromium
Bismuth	Asbestos	Copper
Coal*	Cement	Gold
Fluorite	Gypsum	Lead
Graphite	Iron*	Nickel
Magnesite	Manganese	Petroleum*

\*Of particular interest to this study.

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<sup>4</sup>Chi-fang Wu, "Peiping's War Economy Buildup and Its Effects," Chinese Communist Affairs, Dec. 1965, p. 35.

<sup>5</sup>George B. Cressey, Asia's Lands and Peoples, p. 100.

<u>Surplus for Export</u>	<u>Adequate for Needs</u>	<u>Apparently Deficient</u>
Molybdenum	Mercury	Sulfur
Talc	Phosphate	Zinc
Tin	Salt	
Tungsten		

China is shown to be somewhat deficient in precious metals;<sup>6</sup> however, this has not had a major impact on her industry. Since 1960, China has undertaken intensive geological prospecting and has announced findings of mineral resources so extensive that they would make China one of the world's chief reservoirs of raw materials. It has been reported that some 21,000 geological workers, plus 400 foreign geologists, have participated in the search for minerals.<sup>7</sup>

The chief mineral resources necessary for industrialization on a large scale are coal, iron, and petroleum.<sup>8</sup> Coal is by far the most important power source in China, and she is well endowed with large coal deposits. A United Nations survey in 1952 identified coal reserves at 444 billion tons.<sup>9</sup> Recently, Red China announced new reserves of first 1.5 trillion tons and then 9 trillion tons as of 1958. These figures must be viewed with caution as they may well include the three categories usually described as "measured,"

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<sup>6</sup>Chang-tu Hu, and others, China: Survey of World Cultures, p. 355.

<sup>7</sup>Felix Greene, Awakened China, p. 97.

<sup>8</sup>T. J. Hughes, and D. E. T. Luard, The Economic Development of Communist China, 1949-1960, p. 9.

<sup>9</sup>A. Doak Barnett, Communist Economic Strategy; The Rise of Mainland China, p. 22.

"indicated," and "inferred."<sup>10</sup> It seems safe to say that the estimated 1.5 trillion ton coal reserve is reasonable.<sup>11</sup> Verified coal reserves amount to at least 100 billion tons. With just this amount, it would take 50 years at the present rate of production to use up that reserve. There is no doubt that substantial new reserves either have or will be found.<sup>12</sup> The precarious validity of Chinese claims for coal reserves are recognized, but it still remains that her coal resources are adequate to support a highly industrial economy.<sup>13</sup> China's problem is not a lack of reserves, but the task of getting coal out of the ground in sufficient quantities.<sup>14</sup>

The extent of China's resources in iron ore is a difficult item to measure. The lack of reliable data makes such an attempt precarious. The United Nations in 1951 estimated China's ore reserve at 4168 million metric tons, and in 1956 Wu estimated the reserve to be 5433 million metric tons.<sup>15</sup> The Chinese have stated the reserve to be 1300 million tons in 1956 and then jumped to 100,000 million tons during the Great Leap Forward.<sup>16</sup> This latter figure is subject to great doubt and, for the purpose of this paper, will be ignored. Another estimate of 6800 million tons in 1952 and 8000 million tons

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<sup>10</sup>Yuan-li Wu, Economic Development and the Use of Energy Resources in Communist China, p. 37.

<sup>11</sup>Ibid., p. 35.

<sup>12</sup>Ibid., p. 36.

<sup>13</sup>Ibid., p. 187.

<sup>14</sup>A. Doak Barnett, Communist Economic Strategy; The Rise of Mainland China, p. 22.

<sup>15</sup>Yuan-li Wu, Economic Development and the Use of Energy Resources in Communist China, p. 252.

<sup>16</sup>Ibid., p. 49.



in 1958 appear fairly reasonable.<sup>17</sup> Most authorities conclude that known reserves, plus the relative certainty of new discoveries in recent years, leave China with an adequate source of iron ore reserves for her purpose. Hu states that the iron supply is moderate but sufficient to meet the country's industrial needs for many years.<sup>18</sup> Rostow states that China has adequate supplies for her immediate needs.<sup>19</sup> The World Almanac states iron ore supply is adequate.<sup>20</sup> Wu, after considerable study, states that China has enough iron ore resources to sustain a modern iron and steel industry.<sup>21</sup> This author is forced to conclude that a lack of iron ore reserves does not face China at this time, nor will it in the next decade.

Recent announcements from Communist China have indicated that the long standing shortage of petroleum products is about over. It was reported at the National People's Congress in November 1963 that, "China is now in the main self-sufficient in petroleum products."<sup>22</sup> Chen, writing in the Peking Review in January 1965, stated that because of the rapid rise of China's oil industry, the country is now basically self-sufficient in oil and oil products, and the day of importing oil will soon be over.<sup>23</sup> Actually, claimed oil reserves

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<sup>17</sup>Ibid.

<sup>18</sup>Hu, and others, op. cit., p. 355.

<sup>19</sup>W. W. Rostow, The Prospects for Communist China, p. 261.

<sup>20</sup>"China," The World Almanac, 1965, p. 367.

<sup>21</sup>Yuan-li Wu, Economic Development and the Use of Energy Resources in Communist China, p. 16.

<sup>22</sup>Li, op. cit., p. 4.

<sup>23</sup>Kuang-chun Chen, "A System of Modern Basic Industries Develops," Peking Review, 29 Jan. 1965, p. 16.

in 1953 amounted to 2750 million tons. In 1958, China reported oil shale deposits of 60 billion tons. At the rate of 6 per cent of oil content, 3600 million tons of shale oil would be available. If that total is added to 2 billion tons of natural petroleum resources, it would yield a total of 5600 million tons which compares well with the Chinese claim of 5900 million tons in 1959. Even if questionable claims are overlooked, however, China does have a "measured" reserve of about 200 million tons.<sup>24</sup> It is generally recognized, however, that recent discoveries of petroleum are significant and with proper equipment production can be increased to supply domestic needs.<sup>25</sup> Felix Greene concludes in a similar sense that China could well be self-sufficient in petroleum products by 1970.<sup>26</sup> It must be concluded that China either has or is about to overcome her shortage of petroleum products required for domestic use. She has progressed in overcoming her technological backwardness and transportation difficulties, which have tended to slow down the rate of expansion in the petroleum industry.<sup>27</sup>

In summary, there appears to be no doubt whatever that China has a sufficiently diversified mineral base to become a first rank industrial power.<sup>28</sup>

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<sup>24</sup>Yuan-li Wu, Economic Development and the Use of Energy Resources in Communist China, p. 176.

<sup>25</sup>Hu, and others, op. cit., p. 355.

<sup>26</sup>Greene, op. cit., p. 97.

<sup>27</sup>Yuan-li Wu, Economic Development and the Use of Energy Resources in Communist China, p. 179.

<sup>28</sup>Greene, op. cit., p. 98.

## PRODUCTION

As has been previously stated, accurate data is not available on China's industry. This is also true of production information. The following chart indicates estimated coal production for China.

Coal Production in Mainland China, 1953-1960<sup>29</sup>  
(million metric tons)

<u>Year</u>	<u>Modern Mines</u>	<u>Native Mines</u>	<u>Total</u>
1953	66.57	3.11	69.68
1954	79.93	3.73	83.66
1955	93.60	4.70	98.30
1956	105.92	4.44	110.36
1957	123.23	7.50	130.73
1958	218.86	51.34	270.20
1959	281.72	66.08	347.80
1960	344.25	80.75	425.00

The estimates of Clubb correlate well with the preceding estimates. For example, Clubb estimates that 1952 coal production was 63.5 million tons; 1957 was 124.2 million tons; 1960 was 400.0 million tons; and for 1962 it went down to about 240.0 million tons because of the after effects of the "Great Leap" failure.<sup>30</sup> In 1962, coal production was at about 60 per cent of capacity, and since that time coal production has steadily improved. Accurate estimates, however, are not available.

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<sup>29</sup>Yuan-li Wu, Economic Development and the Use of Energy Resources in Communist China, p. 241.

<sup>30</sup>O. Edmund Clubb, The International Position of Communist China, The Hammaraskjold Forums, p. 18.

Steel production has been estimated as 1.35 million metric tons in 1952; 5.35 million metric tons in 1957; 8.0 million tons in 1958; 15.0 million tons in 1960; and about 9.0 million tons for 1964.<sup>31</sup> Barnett arrived at the same figures for 1957 and 1958, however, considered them to be less precise.<sup>32</sup> Nonetheless, it is obvious that China has progressed a long way in the steel industry.

Petroleum production was relatively slow during 1953-1957, and the Chinese failed to achieve the goals of the First Five Year Plan. They had planned to reach 2 million tons during the period but failed to do so. In 1957, production was only claimed at 1.46 million tons.<sup>33</sup> In 1964, Chou En-lai announced that the 1965 petroleum production was expected to reach 10 million tons and that China could look forward to being self-sufficient in this field.<sup>34</sup> While exact production data is not available, it seems fairly clear that China is nearing the capacity to produce its own domestic needs.

#### OUTLOOK

Premier Chou En-lai stated in March 1962, to the third session of the National People's Congress, his 10-point program designed to adjust the economy.<sup>35</sup>

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<sup>31</sup>Ibid., p. 17.

<sup>32</sup>A. Doak Barnett, Communist China and Asia, p. 59.

<sup>33</sup>A. Doak Barnett, Communist Economic Strategy; The Rise of Mainland China, p. 23.

<sup>34</sup>Yuan-li Wu, "Communist China's Economy: Critical Questions," Current History, Sep. 1965, p. 164.

<sup>35</sup>Chu-yuan Cheng, Communist China's Economy, 1949-1962, p. 151.



1. Strive to increase agricultural production, and first of all the production of grain, cotton and oil-bearing crops;
2. Make a rational arrangement of the production of light and heavy industry and increase the output of daily necessities as much as possible;
3. Continue to retrench the capital construction front and to use material, equipment and manpower where they are most urgently needed;
4. Reduce the urban population and the number of workers and functionaries to an appropriate extent by first of all persuading those workers and functionaries who came from rural areas to return to rural productive work;
5. Compile a stock of inventories and examine and fix the amount of funds for each enterprise so that unused material and funds will be used where they are most needed during the present adjustment;
6. Insure that the purchase and supply of commodities are done well and market supply conditions are improved;
7. Work energetically to fulfill foreign trade tasks;
8. Adjust cultural, educational, scientific research, and public health undertakings and improve the quality of their work;
9. Carry out firmly and thoroughly the policy of building the country with diligence, thrift and hard work to reduce expenditures and increase revenue;

10. Continue to improve the work of planning to insure an all-around balance between the branches of the national economy in the order of agriculture, light industry and heavy industry.

With but little deviation, the 10-point program still represents the focus of Communist China's policies toward industry. All evidence indicates that there will be no return to the disastrous policies of the "Great Leap." Instead there is a serious dedication to the idea that agriculture, and industries serving agriculture, must have priority over heavy industry. There is a new trend away from all-purpose plants and toward specialized factories. There is an emphasis on quality, and workers are praised and rewarded for practicing economy and making technical innovations. Across the country, there are signs of industrial expansion. New plants are under construction and old ones are being reactivated. This activity bears out the Chinese claim that a "new upsurge in production" is at hand. It well sounds like a prelude to the much delayed Third Five Year Plan, due to start in 1966.<sup>36</sup>

New plants in process:

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<sup>36</sup>Taylor, op. cit., p. 181.

Plant Equipment (Whole Set)<sup>37</sup>

Chart shows purchases of whole sets of industrial plants.

<u>Source</u>	<u>Type</u>	<u>Contract Signed</u>	<u>Price in US Millions</u>	<u>Remarks</u>
Japan	Vynylon plant	1963	\$20	Daily capacity 30 tons
Japan	Vynylon plant	1963	\$26.5	Contract voided
Japan	Oil press	1965	\$ 2.4	
UK	Ammonium fertilizer plant	1963	\$ 8.4	Annual capacity 100,000 tons
UK	Synthetic resin	1964	\$12.6	
UK	Tannery	1965	\$ 2.8	
UK	Man-made fiber	1965	\$ 8.4	
Netherlands	Urea plant	1963	\$ 7	Annual capacity 300,000 tons
Netherlands	Urea plant	1965	\$ 5.6	Annual capacity 180,000 tons
Netherlands	Olive oil	1964		
France	Alcohol	1964	\$ 3	Annual capacity 300,000 tons
France	Petroleum prospecting equipment	1964		
Italy	2 chemical fertilizer plants	1964	\$20	Combined capacity 300,000 tons
		1964	\$ 8.9	
Italy	Petroleum processing	1964	\$ 8.9	Annual capacity 300,000 tons
West Germany	Petro-decomposition	1964	\$ 1.2	
Sweden	Reinforced concrete	1964		

<sup>37</sup>Chi-fang Wu, "Peiping's War Economy Buildup and Its Effects," Chinese Communist Affairs, Dec. 1965, p. 40.

Chou En-lai has recently stated that the planned increase in industrial output in 1965 was to be 11 per cent over 1964 levels.<sup>38</sup> There is little reason to doubt such an increase. There is also little reason to doubt that Communist China has substantially recovered from the "Great Leap"; that her policy and planning are on much firmer ground; that, with the use of worker incentives in industry, she can continue to make progress.<sup>39</sup>

Barring war or natural calamities, the outlook for Chinese industry is one of steady growth.

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<sup>38</sup>Yuan-li Wu, "Communist China's Economy: Critical Questions," Current History, Sep. 1965, p. 165.

<sup>39</sup>Charles Hoffmann, "Work Incentive Policy in Communist China," The Chinese Quarterly, Jan.-Mar. 1964, p. 107.



## CHAPTER 6

### FOREIGN TRADE

As stated in the preceding chapter, industry in China is progressing--but slowly. It is progressing much too slowly to suit the needs of the Communist regime. The crux of the matter is the dichotomy between the desire to import industrial items such as machinery, complete plants and technical equipment, and the imperative need to import food and related products to feed a growing population. It will be the purpose of this chapter to take a brief look at the magnitude of China's trade, its character, and its relationship to economic development.

China's trade for 1960-1963 is shown in the following tabulation:

Estimated Imports and Exports of Communist China, 1960-1963<sup>1</sup>  
(millions of US dollars)

	<u>Chinese Imports</u>			
	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>
Total imports	2,020	1,495	1,160	1,190
Free world	745	775	660	780
Communist countries	1,275	720	500	410
USSR	815	365	235	180
Eastern Europe	340	160	65	60
Other Communist countries	120	195	195	170

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<sup>1</sup>Malcolm Stewart, "Can Red China's Economy Sustain Her Drive for Big Power Status - and Tackle the United States - Now?," The Magazine of Wall Street, 12 Jun. 1965, p. 318.

Chinese Exports

	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>
Total exports	1,955	1,520	1,510	1,525
Free world	625	560	585	725
Communist countries	1,330	960	925	800
USSR	850	550	515	410
Eastern Europe	310	145	105	95
Other Communist countries	175	260	300	295

As a point of comparison, the trade of the United States normally runs on the order of 25 to 30 billion dollars a year and Japan's trade is about 4 to 5 billion dollars a year. Significant in the chart is the fact that trade with Russia has shown a marked decline since 1960 and that trade with the free world has shown some increase. Actually, China has had a favorable balance of trade with Russia since 1956; however, the greater exports were necessary to pay off debts to the USSR. It is now reported that the debt to Russia has been paid, and one can look to a continuation of minimum trade between the two countries in view of the ideological differences that currently exist.<sup>2</sup>

The pattern of China's trade began to change in 1960, first because of the need to import food grain, and then to find sources of supply outside the Communist bloc.<sup>3</sup> The most significant element of China's imports is food grains. The average annual spending in foreign exchange for food purchases runs from \$400 to \$500 million. This amount constitutes a major portion of China's total value of

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<sup>2</sup>Werner Klatt, ed., The Chinese Model, p. 125.

<sup>3</sup>0. Edmund Clubb, The International Position of Communist China, p. 27.

imports from the free world. The tabulation below shows food imports in recent years:<sup>4</sup>

		<u>Food Imports</u>				
		(Unit: 10,000 metric tons)				
<u>Country</u>	<u>Items</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u> (Jan.-Jun.)
Australia	Wheat and barley	256	98	294	220	127
Canada	Wheat	237	209	138	204	81
France	Barley	28	44	108	43	--
West Germany	Barley	25	--	12	--	--
Argentina	Barley	5	60	--	135	102
Mexico	Barley	--	--	--	45	--
Rhodesia	Corn	--	6	15	--	--
South Africa	Corn	--	--	14	--	--
Burma	Rice	<u>30</u>	<u>30</u>	<u>20</u>	<u>10</u>	<u>10</u>
Totals		581	447	601	657	320

At the same time that China imports about 6 million tons of food grain, she also exports about 1.5 million tons of food grain, mostly rice.<sup>5</sup> The reason for this practice is that rice sells at a high price on world markets and wheat or barley sells at a lower price, thus the exchange provides a greater "quantity" of foodstuff for China. Because of the need to provide food for the expanding population, as discussed in Chapters 3 and 4, China has been forced to establish an import priority for food grain, chemical fertilizers and fertilizer plants. This fact, in turn, causes a constraint on China's ability to import industrial products and equipment, as the amount of foreign exchange is severely limited by the limited exports.<sup>6</sup>

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<sup>4</sup>Chi-fang Wu, "Peiping's War Economy Buildup and Its Effects," Chinese Communist Affairs, Dec. 1965, p. 37.

<sup>5</sup>"Foreign Trade," China Yearbook, 1963-64, p. 644.

<sup>6</sup>Yuan-li Wu, "Communist China's Economy: Critical Questions," Current History, Sep. 1965, p. 63.

About 50 per cent of China's imports for the past several years have been for food grain and items related to food production. For example, in 1964 China imported about 450 million dollars worth of food grain alone and 1965 imports of food grain are expected to at least equal that figure.<sup>7</sup> With China's growing population and her ability to produce only about 200 million tons of food grain, there is little question that she will have to continue importing food or food related items at about the same level for the next decade.<sup>8</sup>

The character of China's exports is controlled by two major factors--first, by what she has available to export and second, by what other nations will buy. Simply stated, China does have food grains. She does not have enough to meet her needs but what she has is a saleable item on the world's markets. Therefore, China can and does export food items, primarily rice, for the purpose of gaining a greater quantity of wheat and barley.<sup>9</sup> China also exports significant quantities of textiles and manufactured goods and fabrics; however, finding suitable international customers has been a problem.

It is well to recognize that China's trade not only is motivated by necessity but also for political reasons. Premier Chou En-lai has stated, "Trade and politics are inseparable things."<sup>10</sup> In the past, China has used trade as a means for political infiltration in the

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<sup>7</sup>Stewart, *op. cit.*, p. 319.

<sup>8</sup>F. P. Hoeber, and K. G. Lumsden, The Economic Potential of Communist China to Support Military Programs, 1965-1985, p. 43.

<sup>9</sup>*Ibid.*, p. 47.

<sup>10</sup>Hsiang-kao Kao, Chinese Communist Foreign Trade and Diplomacy, p. 2.



Afro-Asian countries.<sup>11</sup> One would expect that political infiltration by the use of trade would continue, even though past infiltrations have been followed by political ineptness and defeat of the Chinese Communists' aims.

The fact remains that China's imports will be regulated by the volume of her exports. She does not enjoy a position in international trade that permits large or long-term credits.<sup>12, 13</sup> In spite of this, China's trade with non-Communist countries is on the rise. Although not spectacular, the increase is expected to continue.<sup>14</sup> As noted earlier, the necessity to import large amounts of grain has forced Peking to discontinue, to a large extent, purchases abroad of machinery, thus reducing her industrial expansion program. She has been using the small amount of money available for imports in the industrial sector to modernize, instead of to expand.<sup>15</sup>

The future of China's trade appears fairly clear. China intends to expand her trade with the West, the underdeveloped nations and Japan for a number of years to come.<sup>16</sup> To the extent that China is able to satisfy her food requirement, the balance of her world trade will continue to be focused on her industrial development.

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<sup>11</sup>Ibid., p. 21.

<sup>12</sup>Yuan-li Wu, The Economy of Communist China, p. 201.

<sup>13</sup>Pauline Lewin, The Foreign Trade of Communist China, p. 88.

<sup>14</sup>Stewart, op. cit., p. 341.

<sup>15</sup>Ibid.

<sup>16</sup>Hai-yun Lin, "China's Growing Foreign Trade," Peking Review, 22 Jan. 1965, pp. 9-10.

## CHAPTER 7

### CONCLUSIONS

In making conclusions about Red China one must, again, consider that completely reliable data is not available. Nonetheless, certain conclusions can be reached with a considerable amount of confidence.

It is quite clear that the Communist Chinese regime is firmly in control of the country. Government mechanisms control all aspects of production, commerce and banking. Communist organizations infiltrate the society to an extensive degree. Social mechanisms, schools, work, communities and virtually every human endeavor has been encompassed by the party system. In spite of the fact that throughout past centuries Chinese governments have been overthrown with regularity, there is no indication that the present Communist regime is in any danger at all of being ousted. At least for the next decade one can safely assume that the present government of China will remain in power.

The population of China will continue to grow and will continue to represent the number one problem for China. Whether it reaches one billion by 1980 or some later date, the huge numbers of people will need to be fed, housed and employed. There can be little question but that the government will have to promote birth control, abortion, late marriages and other steps to slow the population growth. While such measures are distasteful to Communist doctrine, the harsh realities of the Malthusian Theory cannot be avoided. With China's being

largely illiterate, however, there is little hope that even major population control programs will have any significant impact in the course of the next ten years. China will have to live with its huge and growing population.

Agriculture in China cannot produce enough food on its limited arable land to feed the Chinese people. Mechanization, irrigation and fertilizers could increase food production to feed the "present" population but they have little chance of doing so for the increased millions to come along. China can, of course, import food to maintain slightly less than minimum maintenance subsistence levels, but this is a never ending chain that will get worse as time goes on. To the extent that China spends foreign exchange for food and related items, she reduces her ability to import items for industrial development. This dilemma is a most painful factor to the Communist leaders. In its simplest terms, it means that China cannot become a world power for a long, long time. Even Mao has conceded that it will take 40 to 50 years for China to be a world power.

One fact that cannot be overlooked is that a poor crop year or, even worse, several years of bad crops could set China back severely for extended periods. Currently, China is enjoying several years of improving crop production. But there is a tendency to overlook the fact that throughout history China has had periodic natural calamities, droughts, floods and plagues of insects that have made major reductions in crop output. As time goes by, and as the population increases, so does the significance of a bad crop year. As stated previously, the

economic stability of China is in the hands of the Gods insofar as favorable crop production is dependent on the absence of calamities.

While it is not yet apparent, there is no doubt but that China must temper her attitude toward the USSR and other nations of the world. It is imperative that China expand her exports (to permit imports of industrial items). To do so, however, she needs to develop exportable items in addition to food grains; she needs to develop trade with countries that can and will ship her industrial commodities; and she needs trade credit in the world market. As it stands now, China must either pay in acceptable cash or very short-term credit. It is this constraint that is holding China back from her great dream of becoming an industrial giant. It does not appear, however, that the present regime chooses to relax its bellicose attitude. Nonetheless, one shudders to think what China could do in ten years if she patched up her fight with Russia and established friendly relations with the nations of the free world. Her progress could be phenomenal.

China's history, after surviving the withdrawal of USSR aid and technicians in 1960, has progressed well. China has adequate natural resources and has developed the technical knowledge with which to expand her industry. Were it not for the constraints mentioned previously, China could expand her industrial base rapidly. Until China solves the problem of feeding her population and improves her international trade position, she will progress slowly in developing her industry. Such factors as limited transportation facilities and lack of funds for capital investment in industry, indicate that the



industrial base of Communist China will grow slowly over the next decade.

Communist China has made use of "incentives" for both agricultural and industrial production. While the concept of incentives is contrary to the Communist ideology, it is nonetheless the key to much of China's problem. If the regime continues to make use of the incentive device, particularly in agriculture, it could go far in solving its basic problems. The real question is, "Will the regime continue and expand the incentive technique?" It is obvious to this author that the Communist leaders have recognized the significance of incentives and will not only continue but will expand their use. It may be called by other names, but even the Chinese Communists cannot escape the force of individual gain based on individual effort.

Mao and his trusted lieutenants are now old--mostly in the 60 to 70 year bracket. They will be gone in the next ten years. It appears fairly certain that their younger replacements will be more realistic and less antagonistic. If this should prove to be true, China could gain respect in the eyes of the world, could well establish sufficient confidence to gain much needed trade credits, and could expedite her economic development. It is one thing to conjecture on this point and another to predict. It would appear, however, that for the next ten years there will be no significant change in China's attitudes.

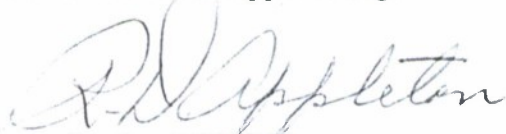
Perhaps the most significant factor about China's economic base and political future is the question of war. It is true that China has the world's largest land army. It is true that China has a most

belligerent attitude toward the West and particularly the United States. It is equally true, however, that the economic base and industry of China are exceedingly vulnerable. If a state of war were to develop between China and the US, China could (or should) expect to see her plants, nuclear facilities, limited transportation facilities and her entire economic base go up in smoke and dust. The 17 year record of progress of the Communist regime could be obliterated in a series of quick air attacks. It is for this reason that China takes a very cautious course in her actions while permitting her public pronouncements to sound belligerent. In the next ten years, this situation is not likely to change.

China has recovered substantially from the disaster of the "Great Leap Forward" and is about to announce the third "Five Year Plan." Supposedly, it will begin in 1966. Some experts have said that the new plan will be a great surge towards industrial development. I think not. China has shown every sign of having learned a lesson from the Great Leap episode, and it would appear that her future development plans will be reasonably conventional. Furthermore, it seems timely for China to press forward in her industrial development but not to ignore the very serious need to keep her agriculture progressing. The world awaits with considerable interest China's announcement of her next plan. It can only be a reasoned effort to expand the present precarious economic base. One should not expect China to repeat her errors of announcing unattainable goals. It will not be a "Great Leap Forward."

At this point in time, China is not a world power. As a matter of fact, she can barely feed her people. It is not possible for her to develop an industrial base comparable with that of the USSR or the United States. Additionally, all evidence indicates that China cannot achieve big power status in the next ten years. Simply stated, she just has too far to go to do it in a single decade. But . . . do not sell China short. Mao Tse-tung and his followers are dedicated to making China a world power and they will go to any length or pursue any course that will achieve this end. Mao and China will undergo any hardship to achieve the ultimate goal of world power.

In this "Year of the Horse," China is plainly not galloping forward. For Mao, nothing could be more disappointing.

A handwritten signature in cursive script, appearing to read "R. D. Appleton".

R. D. APPLETON  
Colonel, Artillery

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